

IN THE CLAIMS:

1. (Currently Amended) A method for producing a monolayer of molecules on a surface, the method comprising:

loading a stamp with seed molecules;

5           transferring seed molecules from the stamp to the surface, wherein the transferring comprises transferring a fraction of the seed molecules loaded on the stamp to the surface and wherein the transferring comprises adsorbing the seed molecules to the stamp and adsorbing the seed molecules to the surface, the adsorption of the seed molecules to the stamp being stronger than the adsorption of the seed molecules to the surface; and

10           self-completing amplification of the seed molecules via an amplifying reaction to produce the monolayer on a flat surface, wherein self-completing amplification of the seed molecules via an amplifying reaction to produce the monolayer comprises producing a homogeneous monolayer area, wherein the homogeneous area comprises a monolayer of molecules on the surface, and wherein the monolayer of molecules on the surface has no diffusive component that can relocate and destroy amplification accuracy.

15           2. (Canceled)

20           3. (Canceled)

4. (Original) A method as claimed in claim 1, wherein the amplifying comprises linear amplification of the seed molecules.

25           5. (Original) A method as claimed in claim 1, wherein the amplifying comprises exponential amplification of the seed molecules.

6. (Original) A method as claimed in claim 1, wherein the amplifying comprises directional amplification of the seed molecules.

7. (Original) A method as claimed in claim 6, wherein the seed molecules are directionally 5 amplified to form conductive structures.

8. (Previously Presented) A method as claimed in claim 6, comprising electroless plating of the directionally amplified seed molecules with a metal.

10 9. (Original) A method as claimed in claim 6, wherein the directional amplification is controlled by the geometry of the seed molecule.

10. (Original) A method as claimed in claim 6, wherein the directional amplification is controlled by application of an external force.

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11. (Original) A method as claimed in claim 10, wherein the external force comprises an electrical force.

20 12. (Original) A method as claimed in claim 10, wherein the external force comprises a magnetic force.

13. (Original) A method as claimed in claim 10, wherein the external force comprises a hydrodynamic force.

25 14. (Original) A method as claimed in claim 1, wherein the amplifying comprises a polymerase chain reaction.

15. (Original) A method as claimed in claim 14, wherein the polymerase chain reaction comprises binding at least one primer to the surface.

5 16. (Original) A method as claimed in claim 15, wherein the polymerase chain reaction comprises supplying a primer in solution.

17. (Original) A method as claimed in claim 1, wherein the amplifying comprises an in vitro translation system to produce a monolayer of protein.

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18. (Canceled)

19. (Canceled)

15 20. (Original) A method as claimed in claim 1, wherein the monolayer protects the surface from etchants.

21. (Previously Presented) A method as claimed in claim 1, wherein the monolayer comprises DNA.

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22. (Previously Presented) A method as claimed in claim 1, comprising repeating the transferring and amplifying on plural surfaces before reloading the stamp with seed molecules.

25 23. (Withdrawn) A biosensor comprising surface treated with a method as claimed in claim

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